Chapter 7
DEVELOPING A GAME
— A CASE STUDY

This chapter gives a detailed description of the development of the Territory Games. Unlike previous sections of the report which have defined concepts and procedures systematically, this is a chronological account giving a 'blow by blow' description of the evolution of one particular game type. The purpose of the account is to give the reader a sense of the complex experience of game development and particularly to show—in the true spirit of all designing—that there is no straight line to a final result; rather, all aspects of a game develop more or less simultaneously.

It should be noted that the Territory Games, like all others given in this report, were developed before we had a complete theoretical overview of what we were exploring. Among other things, the idea of game components was unclear, and we had not yet established a clear distinction between concept games as opposed to conventional board games. Most likely, the development of a game would proceed differently today.

The account given here is therefore only a partial one because, parallel to the development of the game itself, there was an ongoing discussion as to what games were all about and what was essential to the kind of games we were trying to establish in the project. These general issues have already been discussed at length in the previous chapters.

1. Establishing a Basis for the Games

All of our concept games grew out of a combination of concerns, represented on one hand, by an interest in a number of design concepts and on the other, by a fascination with various 'found' physical objects with certain intrinsic characteristics. The emphasis, however, varied
significantly from game to game. Hence, some games began with the specific task of representing a concept abstracted from observation of real life conditions, (e.g., like the notion of hierarchy as it operates in the configuration of a town plan). Others grew out of an interest in objects, perhaps with very particular modular characteristics, and a desire to generate rules about their relationship to each other.

The former tendency dominated the development of the territory games. In this case, we began with a specific concept already familiar to us through John Habraken's theoretical work "Transformation of the Site". The concept of 'territory' is outlined in the introductory chapter of Book 2.

The fact that the concept of territory grew out of the observation of urban settlements in different parts of the world figured prominently in the early discussions about the games. Territory was useful as a tool for measuring the physical impact of various forms of land tenure and spatial control in a dynamic situation where the context was constantly shifting. It seemed to hold potential as the basic concept behind a board game as well. While the distinction between an 'eastern' and a 'western' territorial game was not made in the first experiments, we constantly returned to the two distinct settlement patterns as a way of assessing analogous situations which arose in our game playing. Thus, as the game evolved increasingly towards abstraction, we continued to make judgement calls on the basis of our knowledge of 'real world' situations.

Having chosen a concept with a well-established theoretical background, our attention shifted to the question of how to establish modes of operation and representation suitable for exploring it. At this initial stage, we had no preconceived ideas of what the 'game pieces' should be like or how they should be arranged on a board. It was not so important to establish pieces with very specific physical qualities because the process to be explored was not intended to be an actual simulation of what took place in reality but rather an abstraction and distillation of it.

2. Initial Game Experiments

We began to explore the possibilities of a 'territory' game by applying our own empirical knowledge of how the basic concept operated in some of the physical environments with which we were familiar. With pencil and paper, we sketched a series of scenarios reflecting the basic concept. We developed diagrams which could illustrate the question 'what if...?' as we tried to imagine what moves or operations could be made by various 'powers' so as to maintain and expand control of a defined space in a variety of situations.
Developing Concept Design Games

Figure 7.1

For example, with the page as an 'open', unsettled site, we drew a small box to define and qualify a piece of it as private, thereby establishing an individually controlled territory. Then we asked a series of questions: how might a party expand such a territory and how might a hierarchy of territories within territories be represented? What would happen if several parties were at work within the same field? and so on. We began to draw boxes within boxes in more complex configurations. Once the question of territorial depth entered the discussion, the notion of access into or through territorial configurations became an issue. We began to indicate explicit connections between different territories, distinguishing between more private and more public spaces. With different colored pens, we designated several independent parties. Once the idea of several parties operating at once was introduced, questions of adjacencies, rights of expansion, and of shared or competing systems of control became subjects requiring clarificaton and we began to search for a more dynamic setting in which to continue our research.

This sketching exercise was not a game *per se*. No program or roles had been defined and the rules governing a procedure to be shared by more than one party had yet to be established. It was now necessary to take our simple method of diagramming situations and use it to establish a common procedure, transforming the process of asking questions and posing conditions into a dialogue between different actors, all assuming roles as active players in a game.

Our initial attempt at a game, stemming from the initial sketching exercise, was, to say the least, 'rough and ready'. Beyond some tentative rules and a very general procedure, there
were no set goals for the individual players and no collective program. We did not know how the game would end or what complications might arise. There was simply a notion about spatial control and a crude notation system for representing the configuration.

The first 'Territory' game proceeded as follows: Starting with a blank piece of paper, we defined it as 'site' by drawing a line beginning at an arbitrary point in the middle and leading to its edge. This we designated as public access. It was determined that all subsequent moves would relate directly or indirectly to this access system as the sole feature of the site. Each participant was then invited to establish zones of control, or 'territories', as discrete spatial entities, by drawing boxes on the site. The game was to continue until all the available space on the board was used up.

Some elementary rules were agreed upon by the participants at the outset. Each box was to be composed of four lines creating a closed form of similar dimensions and the territories of each player were to be represented by a different color of line. The players could draw one box at a time, taking turns. A private access system was devised so that each player could develop territories further away from the public access system and its dwindling frontage. Creating private access likewise involved taking a turn to draw a line segment double the length of a box or territory.

The medium of the experiment dictated that once a territory or access had been drawn, it had to remain in the same position for the duration of the game. The board was thus a cumulative record of the history of the experiment being performed.

Some players opted to build large clusters of territories along their own access system while others tended to place as many territories as possible in a scattered arrangement along the public access. Since the making of access also constituted a turn, it became obvious that the former strategy would only make sense over a greater period of time, while the latter, involving less 'planning' was, in the short run, a more economical and efficient use of moves.

Inevitably, the open-endedness of the game generated many problems. The lines of access had no spatial properties while territories did; therefore, how close could players place clusters adjacent to each other? If building private access would give one player a means of expanding a cluster, what should happen when another player got in the way by drawing a new territory too close to this access? And given the freehand drawing technique, when was an available space considered too small for the insertion of a new territory?
In this particular exercise, such problems and questions were dealt with on an ad-hoc basis, through discussion and negotiation among players. We 'eyeballed' tight spaces to decide whether or not a new territory would fit and, if necessary, took an informal vote among all the players. We decided anyone could place as much private access as they wanted and that, in doing so, an individual claimed rights to play territories adjacent to the access as well. On a case by case basis, we tried to decide when one player infringed on the territorial rights of another by blocking a potential move. Generally speaking, a player who had established prior rights to expand over a piece of the board was favored over a newcomer.

The process of establishing territorial control in the real world often involves a complex procedure of negotiation based on custom or localized regulations. However, the exercise at hand required that the process be much more stylized. In order for the game to run smoothly, the subtleties of a negotiation process had to be designated by some simple, commonly understood procedural device, and the game pieces used as a context for the issues of control under discussion had to become more uniform. Extensive revisions were therefore in order.

The 'dry run' approach characterized here was essential to the effective development of a 'playable' game. It helped us to distinguish between essential and inessential tools for the exploration of the concept; it suggested potential directions for the development of a more complete set of rules and clearly defined pieces; and it pointed the way to potentially interesting variations in play. Above all, it pointed toward the need for clearly defined procedures, roles and goals to drive the game in a fruitful and revealing way.

3. A Second Game Variant: Experimenting with Board and Pieces

It is through the medium of the physical elements - the pieces and, to some extent, the board, that we determined the degree to which our games looked like the 'real world' or were abstract contexts in which to explore 'moves' - design actions seen at their most fundamental level. During the course of developing the Territory Games, we found that more literal symbols were helpful in building up a pictorial representation of complex physical environments which we could refer to in analysing emerging patterns. On the other hand, the use of more abstract pieces put the emphasis on the design moves, i.e., the action which took place throughout the game. The addition, subtraction and refinement of pieces reflecting the tension between the need for symbols and the search for a more abstract expression of concepts continued throughout the development of the games.
Most of the initial revisions were aimed at clarifying the pieces and board in response to the first attempt at 'playing' the game. We attempted to introduce more precisely defined, regularized pieces for the purposes of equity, accuracy, and legibility. Territories became modular in size and shape so that the progress of one player in relation to another could be more readily measured. Standardized measurements also made it possible to negotiate and formulate more precise rules about adjacency of the pieces controlled by different players. New pieces were added to improve the action of the game, encouraging the creation of more complex territorial configurations.

Reflecting the move towards standardization, we began to look for some ready-made objects which would be easier to use. We decided to use ready-made, coloured stickers, picked up from a stationer's. One type of sticker was employed as a uniform territorial unit which could easily be attached to the surfacer of the board, leaving a permanent record of game moves. Another type of sticker, dimensionally related to the former but longer and narrower, became a standard access piece which likewise became part of the permanent pattern emerging on the board.

A new potential was given to the territory piece itself. It was decided that, in instances where access to the public right-of-way was severely limited, it should be possible for a player to take an existing territory and convert it into access. This would make it possible to expand further away from the public right-of-way. It was determined that a coloured dot (another type of sticker from the stationer's) could be placed on a territory in one move and that, subsequently, that territory would be considered private access.

![Key to Diagram](image)

Figure 7.2
Yet another, larger sticker was capable of containing a whole cluster of territories and access. It defined a new element, a compound, which when deployed, created a deeper level of privacy or territorial definition under the exclusive control of a single party. To deploy it, one literally placed it over an existing cluster of territories and access, creating a new layer of control which, in turn could be layered by new territories. While this last element added a new dimension of complexity to the game, and certainly signified a greater territorial depth, it also required moves which were less like the literal process of building up an urban settlement.

In making the various changes, we attempted to shift the emphasis in action on the board from a quite literal way of placing territories, as if building lots along a subdivision road, to a more abstract layering of compounds and clusters representing complex configurations of control. The resulting 'landscape' of elements which emerged on the board could still be interpreted by players as urban networks with roads and blocks, but the moves involved in building up the patterns on the board suggested other concerns: the procedures established for deploying the pieces were aimed at increasing the number of layers of control operating within a game (i.e., increasing territorial depth) and fostering a deliberate step-by-step process for achieving it.

We issued a draft manual of pieces and procedures, set up new boards and began to play once more. This time, each player was given 4 moves a turn, enabling them to begin to plan ahead. Once more, new, unanticipated situations arose, requiring discussion, debate and further revisions.

4. Refining Game Rules

Many questions raised in the course of playing the second game variant concerned what action should follow hard and fast rules and what action might better take place in a more ad hoc manner. Very early on, players began to test the meaning of the private versus public access before any rules concerning the encroachment of one player's territory into a zone of influence of another player had been written.

For example, one player would simply put a territory on an access set up by another player. The question immediately arose: was this a legal move? If so, should the player about to be encroached upon be compensated by the newcomer? Should there be some form of procedure enabling the two players in question to negotiate with each other? In this instance, an ad hoc rule was set up requiring formal, verbal negotiation to take place and providing options for how such processes could be resolved. From the point of view of the development of the game, this represented a stylisation whereby unforeseen action was incorporated into the rules of protocol.
In another example, players began to make proposals verbally about future action on the board and attempted to form alliances with other players in order to reach their stated goals more easily. One player would propose to another: 'If you let me put two of my territory pieces on the access you have created, I will likewise allow you to do the same in my adjacent cluster. By joining our clusters together we can then create one large zone of control.' As there were no pre-established rules governing such a procedure, a policy for validating or rejecting proposed 'deals' between players had to be established on the spot. In this case, it was decided that deals or alliances between players were permissible if the results clearly showed in the territorial configurations on the board, i.e. a cluster of one color would also contain the color of another player involved in a particular deal or alliance or the access of a cluster shared by several players would be made up of access pieces corresponding to the colors of both players involved. In this way, verbal agreements between players would always have an impact on the cumulative pattern of pieces being laid out on the board.

5. A Third Game Variant: Making the Game More Playable

We now had a reasonably complete game and a workable procedure for adjusting it as we continued to play. But players, having mastered the use of the basic pieces and a protocol for deploying them, began to question their usefulness as a means of exploring the central concept. Specifically, discussions focused on the nature of the action generated by the rules for placing territories and compounds. Was there enough interaction between various players? Was there a sufficient motivating force to ensure various pieces would be used to their full potential? A whole series of discussions about ways of providing incentive or a driving force behind the game ensued. Each discussion was followed by further adjustments and revisions to the game.

7-8
Figure 7.4

At this stage, the problem of the compound became a central concern. Players found that the process of creating a cluster and then replacing it with a compound was too costly a procedure to make it worthwhile. It seemed to be a better use of turns to establish as many territories in as large a cluster as possible. Therefore, the desired effect of territorial layering was not taking place.

We found that the exercise of merely accumulating territories to fill up a board insufficient to ensure meaningful interaction between players. Until space on the board became severely restricted, there was little motivation for individual players to co-operate or to negotiate the right to expand. In fact, with the rules in place, it was still possible for individual players to build extensive networks of private access claiming considerable space on the board with minimal use of territory pieces and often completely independently of other players. The intense clustering of territories originally envisioned in the game was occurring only to a limited degree.

By revising the protocol, we developed a new game variation to address these problems. In the revised protocol, players were encouraged to build more intensive patterns of clusters and compounds rather than extensive ones. A player could not lay down a new access without first putting a territory on the previous one to 'inhabit' it. A compound, on the other hand, could replace a cluster with only one access and territory in it. Therefore, it was easier to claim territory by establishing compounds and these compounds then became exclusive to the players deploying them. Since we continued to depend on the size of the board in relation to the pieces to determine the duration of play (i.e., when there was no space to expand, the game was over), we decided to further constrict it in relation to the size of the pieces. We also added a new goal to the game to help drive it as an active process involving negotiation and intercourse among players. To this end, we established a starting point for each player on the board, in effect a limited public space, from which each player could begin to develop private clusters. Each player was then given the task of
connecting his/her public space to that of two other players, through the use of the privately deployed access pieces. Thus, as clusters and compounds were being created, connections were being built as well.

Players soon discovered that, to make the most economical use of their pieces, and to maximize the value of their effort (i.e., by maximizing the creation of private territories and compounds), it was useful to share access with one or more players. This entailed quite elaborate negotiations for the exchange of access rights and compensation in the form of turns. There was considerable discussion about whose rights took precedent over another’s. For example, if a compound was deployed to replace part of a shared cluster, it became necessary to determine how a shared access system could be maintained through it. If one player created a compound next to another player’s compound, it was necessary to determine if the former player was infringing on the expansion rights of the latter. Several players often shared the responsibility of building access for a large cluster containing both their territories.

The game played according to these new considerations involved four players, each starting from a different public ‘square’ on the board. Players were free to place pieces in any direction or orientation they preferred as long as the rules of play were met. The often conflicting requirements of connections ensured that the players interacted and often cooperated to achieve individual goals. The resultant pattern on the board was an intricate web of interconnected clusters shared by various combinations of players. We decided to end the game when the first player achieved all the required connections to the other public spaces.

Figure 7.5
The session proved sufficiently interesting with its tension between the idea of private networks and intricate clustering that we decided to test the potentials of the variant further. We asked ourselves if there was any benefit to playing such a game repeatedly... Or had all the lessons been learned in the initial round? Experiments were made with the game board and the site it defined. A series of three new games were played, one after another in the same evening, to test the potentials of changing one variable at a time. We believed such a procedure would reinforce the game as a potentially useful tool of research.

Figure 7.5a

The variable tested in the series of three games concerned the degree of cooperation established between players. With the exception of one new element, basic protocol and game pieces with their deployment rules remained the same. In the first game, each player was instructed to choose a position on the board, marked by a 'free space', accessible to all and roughly the size of a compound, and then build a series of clusters and compounds in such a way as to connect all four edges of the site with a continuous private network. Since it was inevitable that, with each player
trying to achieve the same series of connections independently, conflicts would arise, a 'bridge' element was introduced. By expending a turn to build a bridge, a player could then cross over the access of another player, thereby eliminating the need for negotiating shared access. With this increased potential for independent action on the board, players began to invest more energy in planning turns ahead of time. Effective strategies for playing the game variant required the design of networks which would avoid crossing the paths of other players and minimize potential conflicts. The visual effect was somewhat akin to homesteads forming randomly on a plain, and then expanding their zones of control until they ran into conflict with neighbours.

![Diagram](image)

Figure 7.5b

In the second game, players were allowed to form teams (in this case, two teams of two players each) to see what economies could be obtained by sharing and negotiating access. In this second game, each player deployed fewer access pieces and more territories because they were able to share networks and avoid costly bridge building. The overall pattern took on a somewhat different character, with less extensive networks, more densely clustered with territories.
In the third game, players were instructed to achieve the connections to each edge of the board with a network common to all the participants. In this case, the creation of a network was carried out with maximum cooperation and economy and the 'competition' between players was focused on individual players maximizing clusters and compounds, as densely infilled for scoring purposes as possible. Once again, the resulting overall pattern was more concentrated and less dispersed than the previous one.

Of the series of three games played that evening, the final variant seemed a little flat. In relation to the others, the third game was simultaneously less competitive and more predictable. At the same time, this last version was perhaps more successful than the others in fostering a deliberate, interactive 'team' approach to design. Our territory games, as a medium for exploring certain kinds of design activity had to allow for the process of collective decision making and dialogue as well as competition between individuals. Once again, we were led to reflect on the goals of the game and the nature of the concepts we were attempting to explore.
By playing the game in a series, changing only one variable at a time, we were able to observe some distinct patterns of design action. Network-building had introduced a new dimension to our design activity on the board and helped to maintain a certain driving tension. But while the idea of networks seemed to suggest new directions of investigation, they also detracted from the central concept of 'territory'. 'Bridging' and linking different parts of the board had taken precedence over the layering of territories. The idea of compounds as a means of creating greater territorial depth became a redundant one as there was now less incentive to develop extensive zones of private control. Furthermore, the distinction between zones of private control and common, public zones had become ambiguous. It was therefore harder to draw analogies to real territorial patterns which might illuminate debates about the interpretation of the technical universe, protocol and strategies of play.

6. Introduction of a Two-Role Variant:

A Western Territorial Game

The clarification of the distinction between public areas and private zones of control on the board became the key to developing a new game variant. We decided to shift our focus to a 'two-role' game which introduced a new role representing a higher level of control than the other players. While the new game retained the idea of 'private' players of equal power, a new dimension was added to it: that of an active 'public' player.

In this new variant, the 'public' player was given the task of constructing the public network, in effect a common access system connecting the edge of the board to the territories, compounds and private access of all the other players. This 'public' player would take turns like the rest of the players while the lower level, 'private' players were restricted to laying out pieces which connected to the public pieces actually deployed on the board.

The gate elements were reintroduced in this variant to add 'value' to individual territories, clusters and compounds. A gate between a cluster occupied by one or more players and the public access network would prevent the occupation of the cluster by other players and double the value of its territories. A gate between a single territory and public access would double the value of the territory; two gates on a territory, possible if more than one edge of the territory was adjacent public access would double the value again. The opportunity of achieving higher scores was used as an incentive for more strategic playing.
We decided to restrict the field to a relatively small square and play the game until one or more of the players could make no more legal moves. With the combination of public and private players, this procedure seemed to work well and the game went quickly. The two-level variant encouraged intricate territorial arrangements and protracted negotiations between players. With the basic elements of the technical universe and a corresponding protocol in place, we continued to refine the game.

We experimented a good deal with the exact procedure for deployment of 'public' access. How large should public access pieces be in relation to private ones? Using our modular stickers, we decided to make public access pieces of equal length but twice the width of private access pieces, so that they would read clearly on the board as an autonomous system. In order to help simplify procedures, we decided that all pieces would be deployed orthogonally, and we introduced a gridded field as a frame of reference for placing the pieces accordingly. Sometimes, the moves of previous players made it difficult for subsequent players to make useful moves. We decided they could 'bank' pieces until a further, more opportune round.

We tried to increase the level of 'design' activity taking place in the game by requiring the public player to first sketch the intended configuration of his pieces on a separate sheet of paper. The two-level variant was first played without the higher level player being obliged to produce a design for the public spaces. It turned out that the game lacked interest because the lower level
players could not plan for a future which was unknown and unpredictable. The higher level, being dominant, could claim right-of-way and generally act in an arbitrary way. Only when a plan of the public space had to be produced did the game come alive. Both levels now had to design, while at the same time the public plan and its subsequent execution and interpretation became the medium for interaction between the two levels.

The higher level player's sketch could take the form of an abstract diagram or a much more literal plan of the pieces and how they would get laid out. Once this practice was initiated and private players were aware of an intended configuration, more negotiation began to take place across the two levels of control. Sometimes private players with restricted options for moves might build private access where public access was intended. In this case, the public player could overlay public on private access, in effect appropriating for an intended right-of-way or shift the plan slightly to accommodate the private player.

The introduction of more than one level of control presented some critical problems. With players of dissimilar and often conflicting roles, it became difficult to reconcile different levels of control without prescribing too much of the action taking place during the game.

For example: of critical concern in the development of a smoothly operating two-level variant was the calibration of moves per turn for public in relation to private levels. We found that when the players on both levels had the same number of moves per turn, especially when there were only two or three private players, the public player tended to build up a comprehensive zone of access too quickly, leaving the private players little opportunity for developing complex compound configurations. On the other hand, if the public player consistently had very few moves, the game was in danger of reaching a deadlock too early and the private player coming last in a given round was at a distinct disadvantage, sometimes without opportunity to move at all.

With regards to this situation the game seemed to work best if the public player had approximately half the moves of a private player. If all the moves were taken together, a reasonable balance was achieved if the public player had one out of five or six moves. Eventually, we decided that the public player would move according to the roll of one die (allowing one to six moves per turn) while the private players would move according to the roll of a pair of dice (allowing two to twelve moves per turn). Such ratios obviously must vary between different games, depending on the nature of the roles and the activities of the various players. The trial and error method of arriving at a good ratio, while time consuming, was nevertheless useful. By varying the dominance of public in relation to private pieces on the board, new predicaments constantly arose to instigate further discussion and testing.
Once the two-level variant had been played a number of times to the satisfaction of the participants, it became more or less fixed in terms of rules and procedures. The game was soon dubbed a 'western' territorial game because of its superficial resemblance to orthogonal street grids with private development taking place in blocks. We then looked back toward the one-level game, with all private players, to try to refine an 'eastern' counterpart for the Western Territorial game.

7. A Final One-LevelVariant: The Eastern Territorial Game

All our territorial game variants to date had made some kind of distinction between public and private realms, some more successfully than others. In the 'single level' games, the manner in which 'public' space was designated and the way it became part of shared networks tended to be ambiguous. While the games 'worked' to a limited degree, they did not seem to produce the desired conceptual clarity. We therefore returned to our original analogue sources, the 'eastern' and 'western' patterns of settlements which Habraken had been observing. We realized that in 'eastern' settlements, contrary to western ones, public space did not tend to be the initiator or definer of private space; rather, it was the other way around. In effect, all space was public, or accessible to everybody else unless it was actually claimed and built upon. Territorial building was therefore a parallel series of events among private players operating in the absence of a clearly defined 'public' framework. We therefore decided to define the whole board for an 'eastern' territorial game as public, with the stipulation that players could place territories and compounds anywhere as long as clear access was maintained from each territory to a predetermined point on the edge of the board. We likened this point to the gate in a walled city. Thus the problem of defining a 'free space' for each player or a predefined right-of-way was eliminated. The result of this return to fundamentals was two strongly related but distinctly different territorial games: the Eastern Territorial Game, a one-level game where public space gradually formed as the result of players working independently and in parallel while observing a simple rule of access; and the Western Territorial Game, a two-level game where a higher power established a public network which set the course for a second level of decision-making at the private level.

The identification of a revised one-level variant as the 'Eastern Territorial Game' was an important step towards its finalization. It was only through this contextual analogy that we were able to resolve problems arising in its final test runs. We played the Eastern Territory Game according to the rule of access to a single public gate at the edge of the site. This connection could be made directly through (left over) public space or indirectly, through private access. In one game, the situation arose where a player proposed to place a territory in left-over, public space which was totally bounded by private clusters, cutting it off from direct access to the gate.
A lengthy discussion ensued between participants. Some argued that the territory could not be placed in an area without direct public access to the gate; others maintained a right-of-way existed technically through available private access. In this case 'arbitration' was based on analogy. An attempt was made to picture a parallel, real-world situation where such a configuration of bounded 'public' space might be possible.

In this particular instance the configuration of bounded 'public' space was thought of as a courtyard, with the private access of the the adjoining clusters as a connecting corridor or passage to the public realm. Other interpretations might have been possible as well, but this one was agreed upon by the participating players, thus establishing a precedent which resulted, eventually, in a new game rule governing future plays.

While our board game was abstract, it had not been totally divorced from reality. Although the game had been designed to study territoriality as a universal phenomenon, we fell back on our experience as environmental designers to deal with a specific unforeseen problem. This is not to say that other designers and decision-makers, with different backgrounds, could not have made a different interpretation of of the problem and have come up with an equally valid resolution.

8. Refining the Eastern and Western Territorial Games

The two games underwent a final stage of refinement aimed at clarifying procedures, simplifying and streamlining game pieces, and firming up goals. We sought to establish the minimum number of pieces which could be used to make all the moves and express all the concepts we had been exploring in the territorial games. As we reviewed the pieces and the moves they could make, we were able to remove some of the more ambiguous and extraneous elements of the game.
We looked once more at the private access pieces which had often been the center of controversy and the cause of complex procedural rules. We had both private access pieces and territories converted to access. Did we need both? We decided that, on a fundamental level, players should primarily be establishing zones of control rather than networks, and that private access should only be considered as a device for expanding territorial configurations and developing deeper, more complex clusters. We came to the conclusion that there need only be territories and territories converted to access.

In the final versions of the two territorial games, the pieces were incorporated into a common 'technical universe' which had been devised for the whole range of games being tested and played by the research team. The basic elements of territory and access, were still represented, but whether they took on 'private' or 'public' roles, they could now all be designated with one common piece. A small plastic 'slab' was used to designate a territory, with a different color corresponding to each team player. By flipping the slab over, a white stripe would be revealed, indicating the piece's conversion to access. One series of slabs were left all white for use as public access. Thus, the more literal interpretation of access as a linear network and territory as a rectangular building or yard was set aside for a more abstract mode of representation. Creating access became an act which could only be carried out once a territory had been created and converted. Access was no longer seen as an independent element like an arterial constructed to serve an undeveloped site. Rather it became a qualifying element useful for establishing relationships between territories and a medium for building up more complex configurations of control.

Figure 7.8
We reconsidered the nature of the 'compound' pieces. While they were suggestive of the idea of territorial depth, they had always been difficult to calibrate with the creation of territories and once created, they had rarely been developed to their full potential. It was decided that compounds should involve an actual building or accumulation process rather than be virtually independent elements. As territories were established relative to 'public' access in very different ways for the Eastern and Western Territorial Games, we decided each should have their own method for creating compounds as well. With the Eastern Territorial Game, we reconsidered the role of the gate and decided that, by definition, it defined an inner, more controlled space. Territories did not need gates because, by definition, they represented a private zone of control. However, a gate could be used to control access to a cluster of territories with a private access system. If a cluster reached a certain size, it could be 'gated', thereby giving it the status of a compound, a private zone of control with its own internal hierarchy. It was soon realized that in large clusters, inner gates could define inner zones so that there could be, in effect, compounds within compounds. The use of gates on clusters therefore proved to be a more dynamic method for exploring the idea of territorial depth than through the simple act of placing a 'compound' on the board, ready-made.

A similar idea was explored with compounds in the Western Territorial Game but the expression was a different one. In line with the often speculative response to public infrastructure in a 'western' context, it was decided that compounds should be defined by boundary-markers rather than gates. Since the private players did not have any responsibility for the creation of the public realm, their actions became more concerned with staking claims to potential territorial zones. It was decided that boundary markers could be lined up in combination with clusters of territories to define the depth and width of a compound with potential to be further infilled later in the game. Rules were introduced to prevent players from declaring too much of the board at one time. The placing of boundary markers, as with gates, constituted moves and therefore implied a certain cost or investment as well. With the addition of new markers, compounds could be nested within larger ones, again creating territorial depth, or they could be added to existing ones to increase private control of space on the board. The washers which have formed useful connectors in other games became the gates and boundary markers for the two territorial games. These, in combination with the territorial slabs provided all the necessary components of the games.
While we consider the territorial games to be 'complete', they continue to evolve with each playing session. Each of our experiences in playing the games seems to suggest new directions of research and further variations. Once the basic principles of the central concept have been expressed in an abstract way, a multitude of game variants is possible. Only when we know what research, what demonstration, or what education, is to be served by the game can we decide with confidence what variant to use and how to interpret it. In our development of the Eastern and Western Territorial Games, we did not have a specific research function in mind, other than finding how the concept of territory operated in a game context. The full research potential of such games must be determined by consensus among those players who choose to make use of them in the future.